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THE

PHYTOLOGIST.

A BOTANICAL JOURNAL.

Ὡς ἐμεγαλύνθη τὰ ἔργα σου, Κύριε!—πάντα ἐν σοφίᾳ ἐποίησας.

ΨΑΛΜ. *ργ΄.* 24.

Benedicite universa germinantia in terra Domino; laudate et superexaltate Eum in secula.—*Hymn. iii Puceror.* v. 76.

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WILLIAM PAMPLIN, 45, Frith Street, Soho Square

CUMBRIAN BOTANY.

By E. Green.

Holborn Hill is a large village situated near the extreme southern point of Cumberland, and separated from Lancashire only by the Duddon Sands. It stands on elevated ground, and commands a fine panoramic view, extending from Black Comb on the north, around the furthermost point of the estuary at Broughton, and so on along the Lancashire side of the sands to the long straggling Isle of Walney; Coniston, Old Man, and other mountains of the Lake district filling in the background.

At the distance of a mile is a good and extensive beach, on which break the waters of the Irish Channel. The air is pure and bracing. Close to the village is a station on the Whitehaven and Furness Railway, which is connected with another line branching off from the Lancaster and Carlisle Railway at Carnforth. There is a good inn, and one or two small lodging-houses. It is frequented chiefly by the commercial traveller, the sportsman, and an occasional antiquarian or geologist. For the two latter there is abundance of work; for Druidical circles and other remains of antiquity abound in the neighbourhood, whilst the mighty mass of Black Comb affords endless scope to the mind of either a contemplative or a real practical geologist. "It is," as Professor Sedgwick says, composed "of contorted Skiddaw slate, and has by a great fault been raised two or three thousand feet above its natural level." Near Bootle, eight miles distant, is a red porphyritic dike, which I was anxious to see; but, being pressed for time, the slight search I made was unsuccessful. According to Professor Sedgwick there are many other places on this mountain where the granite has been forced up in a state of fusion through the slate, thus creating a subject for man's highest powers of thought!

I have been told on all hands, for I have not yet made the ascent myself, that the extensive and varied view from the summit of the Comb is of no ordinary description.

I hope that this long preamble may induce other tourists to notice this neighbourhood; for I feel assured that the visitor, whether he be a geologist or an archæologist, a disciple of Linnæus or an humble follower of Izaak Walton, will find abundant

BRITISH MUSEUM

scope for the indulgence of his tastes, be they geological, botanical, antiquarian, or piscatorial.

The vale of the Duddon, bounded by its romantic rocks, will gratify the artist, and supply him with numerous objects for the exercise of his pencil, and his power of selection and combination. It is with the wild flowers adorning the banks of the stream that we are concerned; and I can assure the genuine lover of botany that he will leave this vale a happier if not a wiser man than when he came.

I will now give a loose sketch of my rambles among the floral treasures of this locality between the 6th and 18th of last September. I am indebted to the kindness of Mr. Sim, of Perth, in giving me the names of a few of the plants I was unable to make out. At the suggestion of the same kind friend it is that I publish this record. The truth is, I was afraid my materials were too meagre for these columns, and that what plants I might esteem as somewhat uncommon the people of the South might sneer at as weeds growing at their very doors. The Daisy and Celandine are common all England over, it is true; and perhaps some good people may think that *Verbena officinalis*, *Bartsia Odontites*, *Echium vulgare*, and the like, are also everywhere to be met with. All I can say is, they are not common in this neighbourhood. I have already given an account of the plants about Sea Scale, eighteen miles higher up the coast (see 'Phytologist,' November, 1839); and it will be seen on comparison that, even allowing for the difference of the times of gathering, the Floras of the two places, though in some respects similar, yet vary very considerably. Sallying out with my vasculum on September 6th, with that sense of pleasure so peculiar to the lover of Nature when treading fresh ground, I took the road leading to Broughton, and soon fell in with *Ranunculus sceleratus* and *Samolus Valerandi*; then making my way to the shore I gathered the prickly *Eryngium maritimum*, the beautiful (and to me Heath-like) *Sagina nodosa*, and the minute *Radiola millegrana*, all entirely new to me and all in flower, though the two latter had mostly shed their delicate petals. Next day I crossed the railway at the station, took the road to the left, and then traversed the shore of the estuary until the most southern point of Cumberland was gained. On the route I gathered *Gentiana campestris*, *Statice bahusiensis* (which grows here in abundance), *Triglochin maritimum*, and *Plantago maritima*. At the Point, on a hedge-bank, grew the long straggling *Vicia hirsuta*, which is pretty common in the vicinity, though perfectly new to me. Rounding the Point, I suddenly came upon a fisherman's hut, of modest pretensions as to architecture. An old woman stood before it, anxiously gazing across the sands: she was expecting her son from the opposite shore, and feared the tide, which here rolls in its wall of waters with fearful rapidity, might surprise him. Soon after passing this hut a strange fantastic outcropping of the mountain limestone broke upon my view, the only limestone I saw in the neighbourhood. Here I observed *Asplenium maritimum*, very stunted. On the following day I collected *Anagallis tenella* near the shore at Silecroft, and *Convolvulus Soldanella* on the shore near Kirksanton, between which and Holborn Hill *Asplenium Adiantum-nigrum* grows in great profusion and luxuriance by the roadside. On September 10th I visited a wood above Beck Farm, and there found the following: *Geranium molle, G. dissectum, G. columbinum, Hypericum humifusum,* all abundant; also *Gnaphalium sylvaticum?, G. uliginosum,* and *Eupatorium cannabinum*. I then returned through the village, crossed the railway, and behind the artificial tide-bank discovered a piece of spongy ground, which yielded my old friends *Ranunculus sceleratus* and *Samolus Valerandi;* also, *Cochlearia officinalis ?*, a splendid tuft of *Carex arenaria, Triglochin palustre,* and many others of more frequent occurrence. Next day I paid a visit to the small hamlet of Kirksanton, or "Chapel Sucken." A chapel is supposed to have formerly stood where now is a large duck-pond, bordered by fine plants of *Artemisia vulgaris* and *A. Absinthium*. The latter (common Wormwood) is much sought after by persons at a distance, who come here to gather it for medicinal purposes. In the hedgerows below the hamlet I gathered *Vicia sativa, Lycopsis arvensis,* and *Potentilla reptans.* Flax is here grown to a certain extent, and the small farmers in this part of the county are giving more and more attention to its cultivation. The linseed, after being boiled or steeped in boiling water, is given to the calves, which thrive well upon it.

The potato-disease has been much less virulent here than in most places. In one year, indeed, when this valuable esculent was scarcely to be had for love or money, the Kirksantoners enjoyed almost a monopoly in the market. The soil is generally sandy, and from its contiguity to the sea must frequently be replenished with saline matter, which may perhaps account for the mitigated form in which the disease here appears.

On the 13th I again went shorewards, and passing *Genista tinctoria* and *Drosera rotundifolia* (now both out of flower), I arrived at Hotbarrow, where the above-mentioned outcropping of the limestone suggested the working of a quarry long ago. Here on the shore grew *Glaucium luteum*, and in an old shaft which has been sunk for iron ore I feasted my eyes on splendid plants of *Scolopendrium vulgare*, of richest green. One root bore seven fronds, of which four were forked at the apex; but I presume that neither this individual plant, nor an individual forked frond of the same, is entitled to the rank of a variety. Here also *Geranium sanguineum* grew in abundance, and facing the shore *Agrimonia Eupatoria*, *Rosa spinosissima ?*, and *Hypericum perforatum ?* Though I am *almost*, still I am not *quite*, certain as to the names of some of these plants, hence the notes of interrogation.

On the 17th I searched a streamlet above Beck Farm, and was rewarded by finding *Hypericum Androsæmum*, and fine plants of that beautiful fern, *Polystichum angulare*. *Iris Pseudacorus* is plentiful here and everywhere. Then skirting the hillside in the direction of the village I passed *Sedum Telephium* on the rocks, and in a marshy field below grew *Drosera rotundifolia* and *Narthecium ossifragum*, to me *common* plants. In the brickfield near the station grows *Alopecurus geniculatus*. *Stellaria graminea* and *Trifolium filiforme* are both rather common in the lanes, and on the sands *Aster Tripolium* is abundant.

During my stay here I read Dr. Windsor's interesting paper (in, I think, the September number of the 'Phytologist') and was fired with the zeal to become his humble gleaner. I purposed starting one morning by rail to search Humphrey Head, and especially the wood the Doctor mentioned, but circumstances prevented me. There is one interesting plant at Humphrey Head, which I found some years ago, and although the Doctor does not mention it I cannot think that it has been extirpated; I mean *Atropa Belladonna*, which grows near the Spa.

Should any reader of this journal think it worth while to visit this neighbourhood for any of the objects touched upon he will have also an excellent starting-place for the Lakes. A walk up the glorious vale of the Duddon, and the ascent of the mighty Wrynose Pass, will put the tourist in possession, as it were, of the keys of the Lake scenery, and it will do him good to accustom himself to the wild and grim before breaking in upon the beautiful.

Grasmere, December 13th, 1860.

NEW VARIETIES OF BRITISH FERNS.—No. 1.

By THOMAS MOORE, F.L.S., F.R.H.S.

I propose to place upon record in your pages, as opportunities may occur, a short account of the new forms of British Ferns, the existence of which may have become known to me since the publication of the recent 'Octavo Nature-printed British Ferns;' and in doing so trust to offer information which may prove interesting to your readers. The place of honour may properly be accorded to a very beautiful new form of Lady Fern.

1. ATHYRIUM FILIX-FŒMINA, *v.* VERNONIÆ (Jervis).—Fronds oblong, tolerably symmetrical; pinnæ oblong-lanceolate, suddenly and shortly acuminate; pinnules crispy, irregular, often ramose or geminate, obliquely-ovate, usually somewhat distant, narrowing into a short winged petiole which is decurrent with the winged rachis, split down nearly to the costa into linear-oblong lobes which are distinct and finely saw-toothed; sori not well developed, placed near the base of the lobes, forming a series on each side of and not far from the costa.

This very handsome and elegantly crisped form of Lady Fern was found originally at Milwick by Mrs. Vernon, and was by her pointed out to Mr. Swynfen Jervis, of Darlaston, Staffordshire. In the singularly decurrent or winged condition of its parts it is nearly the counterpart of *Bollandiæ*, a very remarkable new form of *Lastrea Filix-mas*, described in the 'Octavo Nature-printed British Ferns.' The fronds are from fifteen to eighteen inches long, oblong-lanceolate, and nearly symmetrical. The pinnæ moderately distinct, oblong, suddenly contracting to a short serrated point. The pinnules are rather unequal in size, sometimes forked or ramose, sometimes growing two from one point, as if geminate, the basal ones rarely considerably enlarged, shortly petiolate, the petioles winged and decurrent with the winged rachis, divided nearly to the costa into linear-oblong serrated lobes, the undivided portion about equal in width to the wing of the rachides, so that the costæ, petioles, and rachides appear about equally winged, and the pinnæ consequently bipinnatifid; the segments are rather distantly toothed, with their sides recurved in an undulated manner, giving a very pretty crispy appearance to the surface. The development of the parts is somewhat irregular, and yet scarcely enough so to disturb the symmetry of the fronds. This variety is most nearly allied to that called *conioides*, but partakes also of some of the peculiarities of *latifolium*, and in a lesser degree of those of *polyclados*. It is a very handsome form, and very rare.

2. **Athyrium Filix-fœmina**, *v.* **Grantiæ**.—Fronds dwarf, six to eight inches high, broadly oval-lanceolate, crispy, the rachis sometimes branched, and the apex slightly multifid; pinnæ oblong, imbricated, slightly narrowed to a short bluntish point, somewhat irregular; pinnules crowded, overlapping, bluntly ovate-oblong, wavy, pinnatifid with shallow lobes, which are divided into two or three remarkably obtuse rounded teeth or crenatures, connected at the base by a distinct wing to the rachis; stipites and rachides stout; sori not developed.

A very distinct and elegant dwarf form of Lady Fern, communicated by Mrs. Grant, of Collumpton. The plant was found in the neighbourhood of Truro, Cornwall, by Mr. Paul, and given to Mrs. Grant. The short broad fronds with the parts very densely imbricated and the surface crispy, the rounded teeth of its pinnules, and the occasionally multifid and ramose condition of the rachides, are features quite unlike what are found in other described forms, and render this a welcome addition to the already numerous varieties of Lady Ferns.

KENTISH PLANTS, ADDITIONAL.

Addition to the List of South Kent Plants, collected in the course of last summer. By H. C.

CRUCIFERÆ.

Cakile maritima. August 1. In the sand between Dover and Folkestone, about two miles from the latter place.—In the 'Illustrated Handbook of the British Plants,' the south of England is given with a note of interrogation as a station for this species. Will not the fact of its being found near Folkestone help to settle the question?

LEGUMINOSÆ.

Lotus major. Little wood on the Folkestone Road. July.

Ervum tetraspermum.

Trifolium striatum. By the roadside at the foot of the cliffs, between Sandgate and Folkestone. June 23rd.

Lathyrus sylvestris. West Langdon, near Dover. July.

COMPOSITÆ.

Picris hieracioides.

Sonchus arvensis.

Helminthia (Picris) echioides. Between Dover and Folkestone. August 1st.

Cichorium Intybus.

Centaurea Calcitrapa. On the beach near Folkestone. Aug. 1.

UMBELLIFERÆ.

Œnanthe Lachenalii (Gmel.). Salt marsh at the foot of Abbot's Cliff. August 1st.—I have only been able to determine this species from dried specimens collected and sent to me by the young relative who accompanied me in my botanical rambles during my stay at Dover; but the *long pedicels* of the florets, *the reflexed calyx*, the *tapering achenia, not inserted on an enlarged corky disk* (Babington and Bentham), and the fact of its growing in a salt marsh, induce me to believe that I have named it correctly.

In my first list I inserted *Crambe maritima*, but expressed a doubt whether it might not be merely an escape from cultivation. I hesitated about admitting its spontaneous growth on a *pebbly* beach, as most of our Floras give *sandy* seashores as its habitat. My doubts have, however, been removed by finding in the addenda (p. 126) to Jacob's 'Plantæ Favershamienses,' 1777, a copy of which has lately come into my possession, "*Crambe maritima*, St. Margaret's at Cliff,—uncommon." I fell in with it just about halfway between Walmer and St. Margaret's, and have since received specimens collected between Dover and Folkestone; so that South Kent would seem to be a long-known and well established station for the Sea-kale.

Another plant which I had no opportunity of examining except from dried specimens, was the *Statice,* which is so thick as to form quite a turf-like border to the little Abbot's Cliff salt marsh. Not feeling sure of its identity, I submitted it to my correspondent, Monsieur Crépin, and he informs me that it is the same as that which grows on the cliffs, the *St. occidentalis,* Lloyd and Babington's Man. 4th ed., *spathulata* of the earlier editions, and *auriculæfolia* of Bentham.

[The fair authoress of these lists of Kentish plants has just intimated that the species named *Sclerochloa maritima* and *Artemisia maritima* are misnamed. We are curious to learn what are their generally received names.]

VITALITY OF SEEDS.

Some Observations on the Vitality of Seeds. By GEORGE JORDEN.

The vitality of seeds is a subject highly interesting to the botanist, physiologist, agriculturist, and chemist. That the seeds of some species of British plants under certain conditions will retain their vitality in an embryal state for a great length of time is an indisputable fact; that plants are often found appearing and then disappearing after considerable intervals of time in different localities, as I have oftentimes observed; therefore botanists may not consider that they have exhausted any locality of its botanical treasures, for fresh denizens will occasionally make their appearance to surprise us during our explorations.

I have made repeated excursions annually over a limited area of country for nearly sixty years, and occasionally even now find fresh acquaintances greeting me, whose seeds have long lain in repose until some meteorological influence or disturbance of the earth's surface has bid them come forth and again fulfil their destiny, so that we know not where they are reposing in or on the earth's surface; therefore we should be cautious when we censure botanists with giving erroneous statements in recording certain localities where they are not now to be found, but may at some future period.

The following I have frequently found where old hedges have been removed, woods felled, wastes cultivated, and other disturbances of the earth's surface, where their seeds probably have been reposing a long time:—*Acinos vulgaris, Æthusa Cynapium, Anthemis Cotula, Anagallis arvensis, Ballota nigra, Capsella Bursa-pastoris, Cardamine impatiens, Cynoglossum officinale, Digitalis purpurea, Dipsacus pilosus, D. sylvestris, Fumaria capreolata, F. officinalis, Galeopsis Tetrahit, Hyoscyamus niger, Lapsana communis, Myosotis arvensis, Nepeta Cataria, Polygonum Persicaria, P. Convolvulus, Papaver Rhœas, Potentilla argentea, Radiola Millegrana, Reseda Luteola, Sagina procumbens, Sinapis arvensis, S. nigra, Solanum nigrum, S. Dulcamara, Spergula arvensis, Urtica urens, Viola tricolor, Verbascum Thapsus.* The seeds of these plants are most liable to repose without vegetating for indefinite lengths of time. How long the seeds of these plants would remain reposing in Nature's lap is an abstruse problem not easily solved, even by the most acute physiologist. Nature is very chary of her secrets; she must be tortured ere she will divulge them; she likes to tease men and excite his inquisitiveness.

The plants whose seeds possess this property are mostly annuals, some biennials, and a few perennials, and more particularly the narcotic tribes, and those seeds that are round and small, whilst those properties of the seeds of those humble weeds, many of them not destined to exist above a few weeks, and at most a few months, should produce seeds that will remain in a state of nonentity in the earth for very many years; but in the higher orders, as we ascend in the vegetable kingdom, this vital property diminishes, and at last ceases altogether, for the seeds of many of them cannot by any means be preserved—some not more than one year. Those instances, as in all others emanating from a Divine source, shows the care bestowed for the well-being of all organized beings, whether animal or vegetable, even the meanest; for with the Creator of all there is nothing mean.

Geology, that sublime science which has done so much to elevate the intellectual faculties of mankind, has rendered some service to botany, its lovely and inseparable partner: whenever a breach is made in her domain, she willingly repairs it. Railway cuttings and excavations have revealed to mankind many valuable discoveries, and brought to light many botanical gems which otherwise would never have appeared; as I witnessed two years ago, where a railway-line was traced out through a dry barren pasture-field which had been cultivated at some remote period.

The occupier removed the soil to the depth of three or four inches for a space of about two perches, when there appeared in the summer following a number of our native plants which covered the denuded spot. They grew most luxuriantly, pleased with their release from so long a captivity.

The following plants were enumerated growing on that spot:—*Lychnis vespertina, Arenaria serpyllifolia, Potentilla argentea, Lycopsis arvensis, Anagallis arvensis, Polygonum Persicaria, P. Convolvulus, Viola arvensis.* All these plants grow in arable fields in the neighbourhood; the question is, did those seeds remain ever since this field was cultivated, or have from time to time found their way there by other means is a question not to be answered; if they remained ever since the field was last cultivated, it must have been more than half a century, which is not improbable.

The arable fields have selected a peculiar Flora of their own—obtrusive immigrants—from our own and foreign lands, and everywhere pertinaciously follow the plough, many of them most troublesome aggressors. The most troublesome are *Papaver Rhœas, Sinapis arvensis, Anthemis Cotula,* Flora's tricolor banner, red, yellow, and white, which she spreads over the fields of Ceres to her great annoyance. Those three are the most troublesome to the farmer amongst his cereals and legumes; the Poppy amongst the wheat, to which it is particularly attached, because this cereal allows it a longer sojourn to mature itself and ripen its numerous seeds; but a judicious farmer would, as soon as his crops are secured, plough his fields, when the congenial weather at the end of summer would bring up the young plants and allure them from their slumber to destruction; then either plough again or leave them a prey to the frost. For nearly sixty years I have observed this pest to clothe the fields, whenever they were with wheat, a complete sheet of scarlet, and often the crops rendered worthless; and when those fields were grassed for several years and then planted with wheat, still the poppy has appeared in abundance. The old proverb "One year's seeding is seven years' weeding," more likely to be seven times seven. The stinking Chamomile (*Anthemis Cotula*) is a noxious agrarian aggressor: when abundant in clover has caused the death of horses when turned in to feed when hungry and have eaten too much of it with the clover.

There is a peculiar and distinct group of our native plants, the most charming which shun the company of the arable weeds, they are biennials; they conspicuously present themselves to our notice and admiration by waysides, woods, wastes, hedges, ditches, borders of fields, and homesteads; those are the most of note: *Digitalis purpurea, Verbascum Thapsus, V. Lychnitis, V. Blattaria, V. virgatum, Cynoglossum officinale, Reseda Luteola, Hyoscyamus niger, Echium vulgare, Dipsacus sylvestris, D. pilosus, Carduus nutans, Onopordon Acanthium*; they all produce abundance of seeds that lie dormant to spring opportunely to beautify the face of nature. The Foxglove, Henbane, the great Mullein, I have reason to believe, have sprung up from seed where there had been no disturbance of the earth's surface for between forty and fifty years.

I have not been aware that the seeds of any species of the Order *Gramineæ* possess the vitaline properties with those other plants enumerated; nor is it necessary, as they were designed as a perpetual and permanent vestment of green to clothe the mead, the mountain, and the moor, till Flora presents a robe adorned with gems of every hue.

As the seeds of the Grasses do not possess this vitality, the mummy wheat fallacy must be exploded, and considered as a hoax upon the credulity of mankind.

I suggest that our botanic gardens would be most eligible places for experiments on the vitality of seeds, etc.; it would afford valuable instruction as regards this obscure subject.

Bewdley, February 1st, 1861.

ACCOUNT OF A REMARKABLE PEAR-TREE AT HOLME LACY, NEAR HEREFORD.

Our readers will be pleased to peruse the following account of this celebrated vegetable curiosity, which proves that there are wonders in our own land almost as marvellous as the productions of distant and tropical countries. This example of one of the Hereford Pear-trees shows that the tendency to self-propagation is not confined to the famous Fig-tree of Hindostan, the celebrated Banyan.

We have received from the intelligent and obliging gardener of Holme Lacy Court the following account of the present condition of the tree; and his statement is submitted *verbatim* to our readers:—

"Holme Lacy Gardens, January 25th, 1861.

"Sir,—In reply to your request respecting the Pear-tree at this place, I enclose a description by the Rev. J. Green, formerly clergyman of this parish, and an extract from a 'History of Herefordshire,' lately published, and a few remarks on the same. And first I must not lead you astray by describing it as a single tree. The original has no existence, not even in tradition, as far as I can learn, and on its identical position it would be useless to speculate: in my mind there is no doubt but that it has partly or *altogether fallen prostrate*;* and, as described by Mr. Green, the parts in contact with the earth became rooted, and this process is still going on among the prostrate stems, towards the extremities. These latter accessions have their connecting part traceable for more than twenty yards; but in the older trunks those upright stems, perhaps the first descendants of the original, have thrown off their connection, but still leaving enough to prove that that connection once existed; and one of them is imitating its parent in parting with a limb to form another colony.

"I cannot altogether account for the difference between Mr. Green's estimate and my own; but there would be a considerable difference in the measurement of a tree such as this when it was in fruit; and again, the space between the two larger trunks, 24 yards, might be included in Mr. Green's measurement, because he was quite aware that that part once existed, being very recently cut away to obtain a view of the park from the vicarage windows, whereas in my calculation this space is left out; and the solitary part measured by itself being 20 yards by 10. Report says that what is now the flower-garden at the Vicarage was occupied by this tree. And at one time 30 cords of wood were cut from it; and a cord is 16 feet long, 2 feet high, and 2 feet wide, closely built together. Seven hogsheads is the greatest quantity made lately, and 20 bushels make a hogshead. Fifty feet is about the height; and five of the largest trunks measure 8 feet, 8 feet 6½–11½ in., 8 ft. 9 in. in circumference; and at the present time they cover 1850 square yards.

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* I come to this conclusion from the fact of a tree in a neighbouring meadow undergoing the same process; it reaches along the ground no less than thirty yards, and twenty-five yards across. Thirty feet of top, which had begun to form a tree nearly erect, has just fallen again, and the cattle are making sad havoc. In this tree the mark of the graft is distinctly visible. This is the same variety as the larger tree.

"I ought to add, the soil is rich alluvial, about three hundred yards from the river Wye, and only a few yards above its level.

"The following is an account of the large Pear-tree at Holme Lacy, from the pen of the Rev. Mr. Green, as it appeared in a local paper, 1858:—

"'This tree consists of eighteen immense branches, proceeding in all directions, as from a common centre, and lying upon the ground, appear to have broken themselves off, in consequence of their great length and weight, from an original parent stem. At first only partly separating, they seem eventually to have become rooted at the first point of contact with the earth, and then completing the separation, and rising again from the earth in a peculiarly twisted shape, each branch has at length attained the bulk of an ordinary tree. Although much of the tree has been cut away by former residents at the vicarage, the ground still covered by it measures fifty-seven yards in one direction, and in another, at about right-angles with it, sixty-nine yards.

"'The Rev. J. Green has, however, traced it 65 yards in one direction, and 103 yards in another, thus showing that at one time about 6695 square yards must have been covered by this enormous tree.'

"Sir E. Scudamore Stanhope, my employer, has kindly furnished me with the above. The following I extract from a 'History of Herefordshire:'—

"'Near the parsonage house is a remarkable Pear-tree, covering a large space of ground, and forming an orchard of itself, which, according to records dated 1776, yielded from fourteen to sixteen hogsheads of perry, of a hundred gallons each, and is accounted for as follows:—A large branch having been broken by the wind, its head fell to the ground, the butt still adhering to the trunk. Some time after it appeared to have struck into the ground, taken root, and formed a scion. Willing to encourage this *lusus naturæ*, the incumbent gave orders for other layers to be made from the tree in a similar manner, which became rooted, and bore fruit.'

"If I have omitted anything you would wish to know, please to say. I believe these statements to be correct.

"Yours faithfully,

"SAMUEL WELLS."

In addition to the above, John Lloyd informed us that he first became acquainted with this tree in the year 1823; and he was informed that in favourable years its produce was about twenty hogsheads of perry, containing one hundred gallons each. The same kind correspondent sends an account of the same tree from an old friend of his. His letter is also printed *verbatim*.

"Clapham Common, 31st January, 1861.

"My dear Sir,—I have obtained some more information concerning the Holme Lacy Pear-tree, from the landlord of the Stag and Spring Well tavern, Wandsworth-road, near Chandler's nursery, who informs me that the tree, which covers a quarter of an acre of land, stood originally in the parson's garden, but crawled over the hedge into a meadow adjacent. Twenty-one hogsheads of perry have been made from it in one season. It is a wild or nondescript pear, small and green, and so astringent as to be uneatable. It does not produce good perry, only what they term in Herefordshire family drink. Now the worst remains to be told. Some years ago the incumbent of the parish died, and his successor, wishing to make a substantial fence to his garden, cut and mangled the tree in a sad manner.

"Mr. Bluck, my informant, who is a very intelligent man, says he can clasp the original stem within about a foot; he further informs me that there is a younger Pear-tree standing in a meadow belonging to a farm near the church, and this one shows the same Banyan propensities; and further, that there is a full account of the tree in Duncombe's 'History of Herefordshire.'

"I hope, when you publish the account of the tree, you will speak of his Reverence's Vandalism in the way it deserves, and you will oblige the cider and perry drinkers of the whole county.

"The most remarkable fact in connection with this giant of the orchard is the enormous quantity of pears which it has been known to produce in one year. At the time above mentioned, Mr. Wellington, who then held the situation of gardener at Holme Lacy Court, informed me that three years previous, twenty hogsheads of perry were made from it. A customary local hogshead holds about ninety-five gallons, Imperial measure; so if we multiply these two numbers together, we shall have a product of 1900 gallons. Herefordshire farmers calculate their seventeen bushels of pears (if they are of good quality) will, when ground and pressed, produce a hogshead of perry; and according to that calculation, the tree must have borne the almost fabulous quantity of 340 bushels of pears in the year alluded to.

"JOHN LLOYD."

Note by the Editor.

Mr. Bluck says he can clasp the original stem within about a foot. He evidently means the largest stem; for it appears that the original has long ceased to exist.

It is hoped that the above account will satisfy the most censorious of our readers, that this is not *one* of the mare's-nests which we have been accused of publishing. We have the authority of about half-a-dozen eye-witnesses, several newspapers, and county histories to corroborate this account of one of the most remarkable of the curiosities of vegetation.

RARE PLANTS NEAR SPINDLESTONE, NORTHUMBERLAND.

(*From a Correspondent.*)

The Spindlestone hills extend from the ancient castle of Bamborough to Belford, a town of Northumberland, fourteen miles from Alnwick, and three hundred and twenty from London. They are about five miles in length, and are composed, like the coast rocks, of basalt. These hills are only half an hour's walk from the Belford station of the North-eastern Railway, *i.e.* the coast railway from Newcastle to Edinburgh.

Several years ago I visited this rich locality, and some of my discoveries are honourably recorded in Dr. Johnston's 'Natural History of the Eastern Borders.'

The plants are entered here in the order in which they were observed by me for the first time in this locality, for I have visited it more than once.

In a plantation on the west side of the hill, *Saxifraga granulata* was seen associated with *Vicia lathyroides*, both in flower (this was in May); also *Primula veris* and *Asplenium Trichomanes*.

Another capture in this plantation was *Spiræa Filipendula*, heretofore unknown as a Northumbrian plant. Some exception may be taken to this locality (a plantation), but I have been informed by one of the planters of this part of the hill that no ornamental plants were introduced here, as the spot was planted merely for a fox-cover. No walk, ride, nor drive, exists in the whole space, now covered with trees. There is no doubt about the existence of the *Spiræa* on the open bushy pasture while it was in its original state; for since the plantation, grew up the number of the plants has sensibly diminished, and in a few years it is to be feared the *Spiræa* will cease to grow in this locality.

I next turned my attention to the south side of a large rock in the same plantation, and there I observed and collected *Potentilla verna* and *Allium oleraceum*, the latter not yet in flower (May). The last-named plant is very plentiful on various parts of these hills.

Orchis Morio was also seen. On this part of the hill grew also *Trifolium arvense*, *Dianthus deltoides*, *Scabiosa Columbaria*, and more plants of the *Spiræa* were in flower than when I visited the place at an earlier period of the season.

After leaving the plantation, I scrambled about the southern base of the rocks, and there found *Astragalus glycyphyllus*, *Gnaphalium uliginosum*, *Hieracium pallidum*, and other plants of less note. While crossing the hill towards Warn Mills, on damp rocks, I succeeded in finding *Spergula subulata* and *Sedum villosum*; also *Draba majuscula* (*? D. verna*) in abundance. *Arenaria verna* was associated with the above.

My most interesting discoveries were still to come. While standing with my face to the south (towards Alnwick), having the Cheviots behind my back, and while admiring the beauty of a glorious sunset and rich landscape, I chanced to see on the ground, at my very feet, *Allium Schœnoprasum* and *Mœnchia erecta*, both plants additions to the Flora of Northumberland.

When I first visited the place the *Allium* was not in flower, but some bulbs which I carried away and planted in a garden bloomed freely.

I pointed out this station to the late amiable Dr. Johnston, the learned author of the 'Botany of the Eastern Borders.' On these hills also I have collected a pink variety of *Gnaphalium dioicum*, and the narrow-leaved form of *Orobus tuberosus* (*Lathyrus macrorhizus*, var. *tenuifolius*); also *Cystopteris fragilis* and

Asplenium Adiantum-nigrum. *Allium Schœnoprasum* has been detected in two other spots, but under the same circumstances, viz. on a bare rock on which it was barely possible for it to bloom; but the transplanted bulbs flower freely.

I beg to subjoin the following list of plants of which I have spare specimens, and also a list of such as I wish to have in return; and as I am not a professional botanist, and am not in the practice of writing for the public press, I am reluctant to give my name. A note addressed to W. R., Finkle Street, Alnwick, will be duly delivered to the author of this notice of the rare plants of Spindlestone.

List of plants which I can exchange:—

Ranunculus Lingua.
Helleborus viridis.
Corydalis solida.
Sisymbrium Irio.
Hesperis matronalis.
Mœnchia erecta.
Sagina subulata.
Impatiens Noli-me-tangere.
Potentilla verna.
Sedum villosum.
Carduus heterophyllus.
Crepis succisæfolia.
Hieracium aurantiacum.
Pyrola rotundifolia.
Asperugo procumbens.
Statice Limonium.
Salsola Kali.
Polygonum Raii.
Euphorbia Esula.
Daphne Laureola.
Gagea lutea.
Listera cordata.
Scilla verna.
Allium Schœnoprasum.
Convallaria Polygonatum.
Cladium Mariscus.
Sesleria cærulea.
Arundo Epigejos.
Lastrea Thelypteris.

The plants I want are—

Woodsia hyperborea.
Athyrium latifolium.
Lastrea cristata.
Lastrea Fynisecii.
Ophiglossum lusitanicum.
Cystopteris alpina.
Cystopteris montana.
Asplenium anceps.
Asplenium lanceolatum.
Asplenium germanicum.
Adiantum Cap.-Veneris.
Hymenophyllum tunbridg.

W. R.

BRITISH LEPIGONA.

Note on the Occurrence of Lepigonum salinum, *Fries, in Cheshire, and of* Lepigonum neglectum, *Kindberg, in the Isle of Wight.*

I am indebted to Mr. G. E. Hunt, of Manchester, for the opportunity of examining some specimens of a *Lepigonum* gathered by himself in Cheshire, the station being described as 'on cinder-heaps by the side of a canal at Timperley.' Another correspondent has also favoured me with some immature examples of what seems to be the same plant, from the vicinity of the 'salt-springs of Winsford,' also in Cheshire.

In the shape, smoothness, and colour of its seeds, this Cheshire *Lepigonum* is very closely allied to *L. marinum*, Wahlb., the *L. marginatum*, DC., differing however from that species by its more slender habit of growth, its smaller flowers and capsules, and by producing two kinds of seeds (winged and wingless) in the same capsule. The root appears to be annual; and, if one may judge from Mr. Hunt's dried specimens, the petals are shorter than the calyx, and of a bright pink colour at the top. The peduncles are rather long and reflected, and are supported by fully developed leaves, instead of short bracts, as in *L. marinum.* The seeds also of the *Lepigonum* from Timperley, are much smaller than in *L. marinum*, of a bright brown colour, inclining to reddish; in shape compressed, suborbicular, with the border little marked, and perfectly glabrous. A few winged seeds occur, but most are apterous.

I cannot resist the conclusion that this is the plant called *Lepigonum salinum* by Fries, the *Spergularia salina* of Presl; and from its station in the vicinity of saltworks, the name seems sufficiently appropriate.

It is to be observed that Brebisson, in the third edition of his 'Flore de la Normandie,' mentions *Lepigonum salinum* as growing in salt-marshes bordering on the sea, so that it would be well to look for the plant in similar localities on our side of the Channel. Besides *Lepigonum salinum*, Brebisson gives, as occurring in the seaside meadows of Normandy, the true *Lepigonum medium* of Fries, a plant which I believe has not yet been discovered in England.

In the Isle of Wight I have found *Lepigonum neglectum* of Kindberg growing abundantly along embankments, and at the foot of walls bordering on the sea, as well as in the drier parts of salt-marshes. There can be little doubt that this plant will be found widely distributed in Britain, it having usually received the name of *Arenaria media* from English botanists. *Lepigonum neglectum* resembles *L. rubrum*, and, like it, has seeds studded with concentric rows of points or tubercles. At the same time *L. neglectum* is easily distinguished by its much stouter habit of growth, by its short, entire, and dull-coloured stipules, by its peduncles being supported by short bracts instead of leaves, by its larger capsule, and especially by the shape of its seeds, which are rounder and more flattened than in *L. rubrum*, some of them winged; their colour dull brown, their shape broadly obovate, obliquely pyriform, with one side nearly straight.

TODMORDEN BOTANICAL SOCIETY.

We have much pleasure in informing our readers that botanical societies are increasing and prospering. There is a very important colonial association of this kind, to which our attention has been called by a correspondent, and of which an account will soon appear in the 'Phytologist.' The above-named Society claims our first notice.

On Monday evening, the 7th January, 1861, there was a large gathering of botanists in the above-named town, and the proceedings appear, from the report in the 'Todmorden Post' of Saturday, the 12th, to have been of more than ordinary interest.

An account of the festivities and hilarity and hearty enjoyment of the opportunity afforded the friends of science for social, genial, and scientific intercourse, is, of course, more gratifying to those who were there and then present than it would be to our readers; therefore we content ourselves with merely stating that there is a good report of the meeting in the paper above quoted.

We wish that the reporter had furnished the readers of his paper with the faintest sketch, the merest outline, of the President's address, containing a review of the proceedings of 1860. Mr. Stansfield electrified his hearers when he concisely recounted the botanical trophies of the past season, in which the members of the Todmorden Botanical Society appear to have borne no insignificant part.

The county of Lancashire has long been famed for the numbers and energies of its local botanists, and it has recently added another subject for congratulation, viz. a Field Naturalists' Society, which now numbers more than three hundred strong. Its headquarters is Manchester, and the members, which are of both sexes, have their meetings, excursions, soirées, etc.; and their perseverance, success, and enthusiasm in botanical pursuits are highly to be commended. If botany be so prosperous in the provinces, what might be its success if cultivated with as much ardour and energy in the Metropolis, where the access to books for reference and to public herbaria, and to collections of living plants, is so much easier than in provincial towns and in such remote and obscure places in Todmorden!

London not long ago had a Botanical Society, which, like some village benefit clubs founded by the gentry and clergy, languished rather than lived for a brief space, and then died of sheer atrophy or inanition. This result was a natural consequence of the narrow-minded and egoistic policy of its chief patron, who cared more about realizing the petty object of selfish vanity than he did about the interests of science.

The conceit of these would-be promoters of science, viz. the Patron and the Honorary Secretary, who were, in fact, the alpha and omega, the head and tail of the association, was prominently manifested by their causing their pictures to be painted and hung up in the meeting-room. Was the expense of this egregious example of foolish ostentation defrayed out of the funds of the Society, or did the eminent members pay for their likenesses out of their own pockets?

We hope the provincials will not split on this rock or stumbling-block of petty ambition and self-conceit.

Societies for the promotion of science, unless they belie the name which they assume, must have more comprehensive objects and be animated and governed by a more liberal spirit than the defunct Botanical Society of London was; their professed objects should be catholic, not sectarian. The performances of *cliqueism* will do no good service to science nor to humanity; and unless the principles of an association embrace this higher object, viz. the promotion of knowledge among mankind in general, the combination will be an abortive effort to obtain even personal notoriety.

We hope our Todmorden and Manchester friends will not mistake nor misappreciate the purport of these remarks. They are the result of both thought and observation; and though they be condemnatory of selfish aims and objects, they are meant to be both laudatory and encouraging to the hundreds (? thousands) in Lancashire, viz. at Todmorden, Manchester, and Liverpool, whose leaders, supporters, and patrons, appear to be actuated by right motives, and are obviously seeking the welfare and gratification of the many, and not striving through these means to promote their own paltry interest and personal gratification.

We have a request to make to these zealous and successful Lancashire botanists, viz. that they would not confine their discoveries and limit the utilities of their example to their own neighbourhood. If they would send us, now and then, a report of their successes as published in their local papers, we would print them for the common information of all who take an interest in the subject. Our periodical is very widely extended; it embraces the United Kingdom and its colonial dependencies, and it has a very fair circulation in the Continent.

We beg to conclude our report of this interesting and instructive meeting with the following extract from the 'Todmorden Post,' above referred to:—

"The programme being now complete [that is, all the speeches being spoken, all the songs sung, and all the healths drunk, as appointed by the authorities], a very animated conversation ensued upon the subject of Darwin's theory, before alluded to by Mr. Grindon.* The gentlemen who took part in it were Mr. Grindon, Mr. Blomley, Mr. Hedley, Mr. W. M. Sutcliffe, and Mr. C. Chambers, to all of whom Dr. Wood replied in a very long and forcible argument, confuting the Darwinian theory *in toto*, which was listened to with breathless attention, and drew down upon the Doctor the loudest applause. The proceedings concluded about twelve o'clock. We understand Dr. Wood presented to the Todmorden Botanical Society, privately, a collection of dried specimens of plants, 170 species, and from 300 to 400 varieties, gathered in Britain, the Pyrenees, and Switzerland."

Through the kind intervention of a friend and well-wisher to the progress of humanity, we are able to give our readers a very succinct history of this well-organized, carefully-managed, and successful Society. It is from the Honorary Secretary; and the thanks of the proprietors of the 'Phytologist' are hereby tendered to him, for his very interesting history of an association which has far higher objects in view than the collecting, naming, and localizing the native vegetable productions of the district where the members reside.

"I deem it a duty I owe to you and to the Institution, as Honorary Secretary, to furnish you with a few of the statistics and other particulars of the Society.

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* If Mr. Grindon or any other of the maintainers of the Darwinian theory (if there be one) about the origin of species, will be so good as to draw up a succinct epitome of his view on this question, the Editor of the 'Phytologist' will gladly avail himself of such a *précis* for the information of his readers.

"You will see by the copy of Rules herewith sent, that it was established in 1852, by a few botanists and gardeners of the neighbourhood. From that time to the present it has made steady progress, and the number of members now on the books is about a hundred and fifty. It is not to be supposed that these are all botanists; the greater number of them are patrons and friends, people who support the institution from a sense of its utility, as a moral agent working for the common good of the neighbourhood. We have three or four clergymen, some of them active students; and many tradesmen and gentlemen give us encouragement.

"The Society from its commencement has maintained a high moral tone, and has become the admiration of the neighbourhood. No political or religious squabbles ever disgrace the meetings, which are held on the first Monday in every month. The number of members that attend these meetings varies from twenty to forty or fifty, and the number of volumes taken out of the library is on an average about a hundred. Several of the members have become tolerably well acquainted with British plants, and many, both young and old, take a lively interest in the proceedings.

"In the summer months the Society has monthly excursions on the Saturday immediately preceding the monthly meetings. These excursions extend from four to ten or twelve miles round Todmorden, and are great sources of interest to those who participate in them. Some account is given at the monthly meeting on the Monday succeeding the excursion: such as the nature of the district visited, the plants seen or gathered, and the incidents or accidents that occurred *inter ambulandum*, etc. In addition to these the Society has a grand Midsummer excursion, for three, four, or more days, to some distant locality. In 1858 it was to Ingleton, Craven; in 1859 to the Lake district of Cumberland and Westmoreland; in 1860 to Connemara, Clifden, etc., west of Ireland. Some twenty in number joined in the Craven excursion, including two clergymen; about twelve in that to the Lake district; and four in that to Connemara. The Annalist attends all the important excursions, taking notes of all discoveries of any moment.

"The annual meeting is held in the May of each year; a good and substantial dinner is provided, the Secretary reads his Report, the Treasurer makes his financial statement, and the Annalist reads the transactions, and the whole is blended with rational amusement and instruction. There are also occasional *réunions*, such as the one reported in the paper sent you by Dr. Wood.

"It may be as well to state that all the business of the Society is managed *gratuitously*, and the whole of the subscriptions exclusively devoted to the purchase of books, specimens, etc."

The following are extracts from the rules, etc., of the Todmorden Botanical Society:—

"At a meeting held as above, on the 26th May, 1852, it was resolved—

"That this Society shall have for its object the study of botany, the purchasing of books and periodicals, the investigation of plants, their physiological and anatomical structure, their agricultural and horticultural value, the best modes of cultivation, their classification, arrangement, names, etc. To further this object, lectures will occasionally be delivered, papers read, discussion entertained, and details of botanical rambles and experiments given by the members at their respective meetings.

"It is desirable that all the members should bring to the Society's meetings specimens of plants, flowers, fruits, seeds, etc., for the purpose of investigation."

"Also, the subscription to be sixpence per month, or six shillings annually, to be paid in advance."

The number of works on botany, horticulture, floriculture, chemistry, geology, entomology, conchology, etc., belonging to the Society and circulated among the members, is upwards of three hundred, probably amounting to upwards of a thousand volumes.

It is hoped that the Annalist will find time now and then to send us a report of the discoveries made by these enterprising botanists. We recommend the example of the friends of progress at Todmorden to the consideration of our readers in all parts of the kingdom, and further take the liberty of telling them to "go and do likewise."

Reviews.

Outlines of British Fungology. By the Rev. M. J. Berkeley, M.A., F.L.S. London: Lovell Reeve, 1860.

We trust the publication of this work is a symptom that Mycology is about to become more studied by British botanists than it has hitherto been; for hitherto, certainly, the students of that branch of the science have been "few and far between," and the study of it "more honoured in the breach than in the observance." It is now nearly a quarter of a century since the second part of the fifth volume of Hooker's 'English Flora' (written by the same Mr. Berkeley who is the author of the present work) appeared; and how few of the botanists of England have devoted themselves in any measure to the study of the Fungi during that period! Other branches of cryptogamic botany have received a considerable share of attention, and the Ferns, in particular, have been a very popular object of study, and have excited much interest, but the poor Fungi have lived and died unnoticed and uncared for.

One cause of this neglect arises, we think, from a great and general misapprehension as to what Fungi really are, and from a tendency to consider them as disagreeable and even disgusting objects. In this, however, there is a great mistake, as, though many of the Agarics and other larger kinds are not very pleasant to behold, especially when in a state of decay, there are innumerable forms of beauty and grace to be found among the lower and smaller kinds. On this point Mr. Berkeley observes, in the commencement of his first chapter, "Every one is more or less acquainted with the soft, fugitive, variously coloured, succulent plants which abound everywhere in our woods and meadows, and which are known under the common names of Toadstools, Mushrooms, or Champignons, according as they are objects of disgust or admiration, from their real or supposed poisonous or nutritious qualities, . . . but there is no general conception that the multitudes of parasites which grow on dead and living plants, frequently inducing disease or decay, the mould which runs over our fruit and provisions, or the yeast of beer and mother of vinegar, are closely allied productions, if indeed the very existence of some amongst them is recognized at all."

The publication of a popular volume like the present will do much to clear away the ignorance which prevails on the subject; and we heartily wish it success. Mr. Reeve has secured the services of one of the first Mycologists of the day, either at home or abroad, and the book is altogether a handsome one, and got up in excellent style.

In his preliminary observations, Mr. Berkeley alludes to the word "*Fungology,*" used in the title of the book, and defends it on the ground of its being very generally received. Certainly *Mycology* is the more correct term, but perhaps it does not convey the meaning of the subject-matter to the general reader so well as the more spurious one of *Fungology.*

After several chapters of "introductory matter," in which we think he rather takes it too much for granted that his readers already know something of the subject, but which are full of interesting facts and observations, our author goes on to give a complete list of British Fungi, including all the discoveries that have taken place since the publication of the 'English Flora,' and which are numerous. Greater attention is of course paid to the larger and more conspicuous Fungi, as the genera *Agaricus, Polyporus,* etc. etc., and by far the greater part of the volume is taken up in the description of these; while of the smaller Fungi a mere list, without the specific character, is given. In a popular work, as this undoubtedly is, it was probably prudent to confine the attention principally to the more showy and noticeable species; but we could have wished that the reader's attention had been more particularly directed to the many microscopic beauties which lie hid in many of the smaller kinds, as, for instance, in the numerous and various species of *Sphæriæ* with which almost every dead or decaying branch is covered, and the sporidia of which assume the most varied and curious forms.

The 'Epicrisis' of Fries, which was published subsequent to the appearance of the 'English Flora,' has (as was to be expected) been taken as the basis of the arrangement of the Hymenomycetous Fungi. Assuredly that work is a wonderful production; but we cannot help thinking that the distinctions of Fries are sometimes too refined and delicate for practical purposes. Mr. Berkeley well remarks, in his preface, that "few exercises of the mental powers can be more improving than the study of such a genus as *Agaricus;*" for the subdivisions are so many, and the distinctions so nice and subtle, that it requires considerable exercise, both of memory and judgment, to assign to any particular plant even the precise *subdivision* to which it belongs. And the same remark applies to other large genera.

The old genus *Agaricus* is now divided into upwards of a dozen distinct (though not very different) genera, and even the restricted genus *Agaricus* is subjected to many subdivisions.

We observe that Mr. Berkeley, in his descriptions of species, sometimes omits to give the colour (or colours) of the plant, and this we consider an omission of some importance, especially in a popular work, as the colour in these lower vegetables is often of considerable service in determining the species, and at any rate is a great help to beginners.

In the nomenclature of the smaller Fungi great improvement has taken place of late years, and many new genera have been formed for the reception of new or anomalous species. Among these we may instance the partition of the old genus *Sphæria* into a number of distinct genera, corresponding (in general) with the former subdivisions of the genus. We notice, likewise, the transference of several old species to other genera, as *Dothidea typhina* to *Hypocrea*, *Sphæria Dothidea* to *Dothidea*, *Excipula Rubi* to *Cenangium*, etc. etc., all which appear very proper and necessary.

The volume contains twenty-four coloured plates, which are mostly well executed and faithfully coloured, though we must except several figures, which are not very well done, as *Agaricus vaginatus*, *Boletus edulis*, *Dacrymyces stillatus*, *Helvella crispa*, and a few others. The colouring is perhaps too bright in some instances, but in general the illustrations are very good, and it is marvellous to see how many figures the artist has contrived to introduce in a single plate.

Here, however, we must repeat our regret that so little notice has been taken of the lower and smaller Fungi. We think that *at least* half-a-dozen plates out of the twenty-four might have been devoted to these, with microscopic delineations of their structure and fructification; and this would have been of great service to beginners, as it is almost impossible for young students to determine the smaller Fungi without the aid of figures.

J.

Excelsior, or *Murray's Royal Asylum Literary Gazette*, September, 1860. Perth: printed by Robert Whittet, High Street.

This number of the 'Murray,' as it may be styled for the sake of brevity, in rather humbler if not in briefer parlance than its primary and more august title, contains for its leader and principal subject the Flora of Moncrieffe and Kinnoull hills, or rather, a list of some of their rare, and probably also their common productions, a list, we are respectfully informed, "for which we are indebted to the kindness of Dr. Balfour, . . . the distinguished Professor of Botany in the University of Edinburgh."

The learned Professor is equally and honourably distinguished by his love of the science, and by his desire to extend its knowledge among his pupils. His class expeditions have been frequently noticed in our pages.

We hope, for the credit of the leader, and especially for the reputation of the University of which he is a popular and energetic member, that the account of this class excursion, if not a caricature, is at the very least a gross exaggeration. If it be not, all confidence in the ancient saying must be shaken, "Ingenuas didicisse fideliter artes emollit mores, nec sinit esse feros." The writer of this notice will not register in the pages of the 'Phytologist' the doings of Scotia's ingenious youth, the hope of the nation, the alumni of Edina's celebrated seat of science and learning. There is enough, and more than enough, in the 'Murray' of September, 1860, if true, to show that Scotland, proud of the scientific reputation of her children, has no reason to boast of their progress in the knowledge and observance of the graces, amenities, and civilities usually expected among the more polished classes of society.

Justice to ourselves demands a few strictures on the list itself, which forms the fundamental portion of the article in the 'Murray.' The tumultuary proceedings of the "Philistines," as they are not very decorously called, are but like the garnishing to the substantial viands served up for the delectation of eccentric taste, not for the enlargement of our knowledge.

All the plants recorded by the learned Doctor have already been published in the 'Phytologist,' some of them more than once. The writer of the list and the editor of the 'Murray' could hardly be ignorant of this fact; they ought not to be so; and in common courtesy they might have stated in their notice of their second-hand discoveries, that if they were not indebted to our pages for the information which they circulate as original, they might have noticed the other labourers who had preceded them, not as gleaners, but as original workers, in the same field. Literary etiquette, as well as common honesty, would have required some reference to the periodical in which the plants growing about Perth were originally published.

This *new* but not *original* list of the Perth plants is as remarkable an illustration of the ancient Latin verse,

> "Hos ego versiculos feci, tulit alter honores,"

as can be supplied by the whole range of literary and scientific productions.

The honest and simple-minded author of the Perth Flora might adopt the language of the poet when a brother poet claimed the merit and reward of the famous distich which he did not write; and he would not be wrong in saying,

> "Has ego herbiculas legi, tulit alter honores;
> Sic vos non vobis vellera fertis oves."

The sheep is shorn, and her fleece taken, without so much as saying, "With your leave."

As the name of the original discoverer of the stations of these rare plants is omitted in this new list, for reasons best known to the compiler and publisher, it will not be entered here, not because we are ashamed of our correspondent, but because his name is as familiar to most, if not to all of the readers of this periodical, "as household words."

After all, it is satisfactory to be able to produce the authority of the eminent Professor of Botany in the University of Edinburgh as a voucher for the authenticity of the plants already recorded in our pages, and also for the genuineness of the localities where they grow. The 'Murray' may henceforth be quoted as a corroborative, though secondary evidence, in support of the facts originally published in the 'Phytologist.'

One point, not satisfactorily cleared up in reference to the spontaneous Perth plants, has been omitted, and we (the Editor) are sorry for this omission; we mean that in reference to *Arenaria balearica,* about which some remarks, not altogether of a friendly kind, though they may have been well intended, have been made by a contemporary, who shall also be unnamed here: some of our readers know to whom this allusion is made.

We hope that the next time the amiable Professor of botany above mentioned leads his pupils to the hills of Kinnoull and Moncrieffe, he will give us his opinion about the *Arenaria balearica.* A.

BOTANICAL NOTES, NOTICES, AND QUERIES.

To the Editor of the 'Phytologist.'

It is customary with nearly all British botanists to consider both species of *Doronicum* as *alien* to this country. My own observation of the plant being confined to one habitat for *D. Pardalianches*, near Bewdley, in Worcestershire, I can scarcely offer an opinion. The place where it grows there is a hedge and ditch, and at some distance from a house; but, of course, in conveying manure or refuse to fields or meadows, seeds of garden plants may be taken to what appear very unlikely places for garden plants to grow. In this habitat, an *escape* from a garden (in the true sense) it certainly is not. What has led me to these remarks, is a passage in Ben Jonson's 'Masque of Queens,' apparently written for performance at the court of James I., about 1609, consequently anterior to the time of Ray. The passage is—

> "And I have been plucking plants among
> Hemlock, Henbane, Adder's-tongue,
> Nightshade, Moonwort, *Libbard's-bane*."

Now you will observe that all the plants named here are acknowledged native except the "Libbard's-bane;" and most of them are plants not at all likely to be cultivated; hence it is a fair inference that the Leopard's-bane would be a wild plant. Gerard and Parkinson both give Northumberland as a locality for *D. Pardalianches*.

I offer these observations for the benefit of those who have better means of observing this plant than I have. T. W. Gissing.

Wakefield.

To the Editor of the 'Phytologist.'

In the 'Phytologist' for November, 1860, there is a paper on "Poets' Flowers," and in some lines from 'Comus,' the Knotgrass is noticed. On reading this article, it brought to my remembrance Sir Walter Scott's allusion to the plant in the 'Lady of the Lake,' where he says,—

> "The Knotgrass fettered there the hand
> Which once could burst an iron band."—Canto iii. 5.

It is possible that the plant quoted by the two poets may not be the same, but I am unaware of any other plant bearing the name of Knotgrass than *Polygonum aviculare*.

It has always struck me as one of the most beautiful passages in the same poem, Scott's description of Ellen's grace and sprightliness, as narrated in the following lines :—

> "A foot more light, a step more true,
> Ne'er from the heath-flower dashed the dew.
> E'en the slight Harebell raised its head
> Elastic from her airy tread."—Canto i. 18.

The plant alluded to by Scott is evidently *Campanula rotundifolia*, which is often called the Harebell, although older writers have given that appellation to *Hyacinthus nonscriptus*. R. Heward.

'Phytologist,' vol. iv. p. 224.

Sir,—Your correspondent, A. G. More, who dates Bembridge, June 2, 1860, writes as follows:—"Those botanists who are in the habit of referring to the latest (fourth) edition of the 'Manual,' or to the paper published by Mr. Babington in the 'Transactions of the Botanical Society of Edinburgh,' will hardly require to be told that only twelve species of the Batrachian section have hitherto been recognized in Great Britain."

Perhaps not; yet there may be some botanists, like myself, who have not all the four editions of the 'Manual,' and never saw a single volume nor part of the 'Transactions.' May such be excused for not knowing how many Batrachian *Ranunculi* have been hitherto recognized in Great Britain? Your correspondent may reply, "So much the worse for them." I shall only say of the Batrachians the converse of what the Orientals (see Haji Baba, *passim*) say of their beloved friends, "May their shadows never be *more*." BETA.

PTERIS AQUILINA.

In August last I observed a quantity of Ferns in their marchantiate state (newly-developed), growing upon the front wall of an area which gives light to a single window in the smoky locality of Lambeth. There were about thirty plants, and some of them had so far expanded their first frond that I could identify them with *Pteris aquilina*. A few days ago I paid a second visit to the place, and to my great disappointment found that the bricklayer had been there, and with that fatal instrument to Ferns, a trowel, had scraped off every Fern, and stuffed the joints with mortar. The question how the Ferns came there is far from being an uninteresting one. Clapham Common is the nearest locality where the plant grows wild, and the late Dr. James Forbes Young's garden in Kennington Lane is the nearest place where it was then cultivated,—the latter place distant about half a mile, and the former about three miles; and with so many buildings intervening, it is scarcely possible that the spores could be blown from either place. A more probable solution to the mystery attending its origin is, that we frequently may see it upon costermongers' wheelbarrows, used to divide the different kinds of fruit, and it is extensively used in packing fruit for the London markets. JOHN LLOYD.

SHAMROCK.

Shamrock, the national emblem of Ireland, is *Trifolium repens*, not *Oxalis Acetosella*. (See 'Phytologist,' N.S., vol. i. p. 366 and 519.) C. E. P., Torquay, who asks (see 'Phytologist,' N. S., vol. iv. p. 319), "on what grounds botanists now consider the *Oxalis Acetosella* to be the real Shamrock of Ireland, and why it should not be a Trefoil," is hereby informed that botanists do not consider the Wood Sorrel to be Ireland's Shamrock. They believe, or most of them believe as the writers in the 'Phytologist' do, as quoted at the head of this note. The question might be easily answered on etymological principles. *Shamrog*, or *Shamrock*, is in the Irish language the term for *Trefoil*. On principles of common sense the same result will follow. The tradition is that St. Patrick took this plant as an illustration of the doctrine of the "undivided Trinity." The humble White Clover, *Trifolium repens*, the Saint could easily procure, as it grows everywhere; he had merely to stoop and pick up an illustrative example of "three in one," and one developed into three. He might have hunted for days ere he had the hap to light upon Wood Sorrel. It is unphilosophical to reason on what is not a fact. It is not true that botanists deny the identity of Shamrock and Trefoil. A few of the fraternity, who wish to appear wiser than their brethren, may advocate the claims of Wood Sorrel, but some affect paradoxes. R.

COWSLIPS OF JERUSALEM, OR JERUSALEM COWSLIPS.

(See 'Phytologist,' N. S., vol. iv. p. 320.)

Parkinson, in his 'Paradisus,' p. 248, London, 1629, informs his readers that there are several kinds of Jerusalem Cowslips, viz.:—

"1. *Pulmonaria maculosa*, common spotted Cowslips of Jerusalem."—This is *Pulmonaria officinalis*, Linn.

"2. *Pulmonaria altera non maculosa*, unspotted Cowslips of Jerusalem."—This is only a variety of the above.

"3. *Pulmonaria angustifolia*, narrow-leaved Cowslips of Jerusalem."—These have also spotted leaves, but the leaves are longer and rougher than in Nos. 1 and 2.

"The Place.—The Cowslips of Jerusalem grow naturally in the woods of Germany, in divers places, and the first kind in England also, found out by John Goodier, a great searcher and lover of plants, dwelling at Mapledurham, in Hampshire.

"They flower for the most part very early, that is, in the beginning of April.

"In English they are diversely called, as Spotted Cowslips of Jerusalem, Sage of Jerusalem, Lungwort, and Spotted Comfrey." Z.

AN INTRUDER.

In June, 1858, I observed *Orobanche minor* growing upon Clover in a paddock that had been laid down the preceding year. In 1859 I observed it in the same place, and also among a collection of Cape Pelargoniums standing in a greenhouse situated upon an eminence, at a considerable elevation above the paddock, and about two hundred yards from it, and quite out of sight of it. It did not confine itself to one species, but grew indiscriminately upon several with very opposite habits, as the hard-wooded *P. ternatum* and *P. citrodorum*, the succulent soft-wooded *P. echinatum*, and the tuberous-rooted *P. triste*, but I did not observe it growing upon any species belonging to either of the subgenera *Hoarea* or *Phymatanthus*. In the present year, in addition to growing upon Pelargoniums, it grew upon *Sonchus platylepis* and various other plants, as well as upon a gesneraceous plant in the stove. JOHN LLOYD.

VENUS'S LOOKING-GLASS.

Can you or any of your correspondents kindly inform me if the Speedwell has ever been known by the name of Venus's Looking-glass? I have always heard this name bestowed on *Specularia Speculum* (a garden flower in England, but a common cornfield weed on our plateau above the Meuse), until lately, when looking over 'Recreative Science,' No. 14, p. 129, I fell on the following passage in an article by Dr. Spencer Thompson, on "Wayside Weeds and their Teachings," in which, after enumerating heath flowers, Holly, Bindweed, etc. etc., he says, "Next have we the Veronica, Speedwell, or Venus's Looking-glass, of real heavenly blue"! Is this a slip of the Doctor's memory, or of his pen?

ELEOCHARIS AND OLOLEUCOS.

Will the Editor kindly allow a word in favour of writing *hololeucos*, instead of the specific name usually spelt *ololeucos*, or *ololeucus?* ('Phytologist,' p. 274.) The aspirate is surely as much required in this case as in *Heleocharis*. H.

[The editor has no objection to any innovation which is an amendment; but at the same time he begs to suggest that the verbal critics would have the goodness, out of kind consideration for the less learned and uncritical of the fraternity, to enter, along with the *new* name, that by which the plant is more commonly known.]

BOTRYCHIUM LUNARIA, curious var. of, with compound fronds, on the hill above Llandderfel, between the farm called Maes-y-Clawd and Coed-y-Derw.—J. JONES, 1860.

NOTICE.—Mr. George Wolsey, of St. Andrew's, Guernsey, hereby notifies that he is now ready to supply dried specimens of *Isoetes Hystrix* on the following terms, viz.:—He will send *three* specimens for *six penny postage-stamps*, sent in an envelope, enclosing an empty envelope, stamped and addressed to the applicant.—Note: Mr. Wolsey, the discoverer of this interesting novelty, can supply any number of examples on these conditions.

Communications have been received from

W. Richardson; Peter Inchbald; J. G. Baker; John Sim; A. G. More; J. B. Wood, M.D., F.R.C.S.; W. Winter; S. Wells; H. Beisly; Rev. W. M. Hind; John Lloyd; Dr. Lawson; George Jordan; Tom Stansfield; George Wolsey; Thomas Moore; William Pamplin; H. C.

BOOKS AND NEWSPAPERS RECEIVED FOR REVIEW.

The Todmorden Post. Todmorden Advertiser.
The Manchester Examiner and Times.
The Harrow Gazette.
The Gardener's Chronicle, Jan. 26th.
The Chemist and Druggist.
The Kingston (Canada) Chronicle and News.
Rules, etc., of the Todmorden Botanical Society.
A Priced Catalogue of British and Exotic Ferns, etc., offered for Sale by Abraham Stansfield and Sons, Todmorden.

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